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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,124	10/12/2001	Chee-Yee Chung	884.538US1	3114

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EXAMINER

DINH, TUAN T

ART UNIT PAPER NUMBER

2841

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/977,124

Applicant(s)

CHUNG ET AL.

Examiner

Tuan T. Dinh

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 27-35 is/are pending in the application.
4a) Of the above claim(s) 8, 9, 28 and 29 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-7, 10, 11, 27 and 30-35 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 12 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Applicant's election without traverse of Group I (claims 1-11) in the reply filed on 05/06/04 is acknowledged.

Claims 8-9, and 28-29 are recited the limitations, that does not read on Specie I (figure 3) of the invention.

The requirement is still deemed proper and is therefore made FINAL. Claims 8-9 and 28-29 are withdrawn from further consideration as being drawn to non-elected subject matter.

Specification

1. The disclosure is objected to because of the following informalities:

Page 1, line 32-page 2, line 1, "the motherboard capacitor 103" should be -- the motherboard power supply decoupling capacitor 103 or the decoupling capacitor 103--..

Appropriate correction is required.

Drawings

2. The drawings are objected to because the cross-hatchings of the drawings are not proper, for example, **figure 3 fails to show the cross-hatched of a dielectric layer 332, a solder resist 328 ...etc. (see page 5, line 19-page 7, line 6).** Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing

sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show "**a first contact point (element 353) connected to a capacitor terminal (element 306).**"

Figure 3 shows the first contact point 353 connected to a first conductive layer 337, and a solder 326 is connected between the terminal 306 and the first conductive layer 337 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 11 and 31 are objected to because of the following informalities:

Claims 11, 31, lines 3-4, "a circuit board capacitor" should be changed to - - a circuit board - - for proper reading.

Claims 11, 31, lines 3-4, "a circuit board plane" should be changed to - - the circuit board plane - - for proper antecedence basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-7, 10-11, 27, and 30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasaka (U.S. Patent 6,201,286) in view of Novak et al. (U.S. Patent 6,525,622).

As to claims 1-2, 27, Nagasaka discloses a resistive element (12-figures 1-2, column 4, lines 2-3) and an apparatus as shown in figures 1-11, comprising: a resistive material connected to first and second contact points (12a, 13a, column 4, line 24, see figure 2), the second contact point (12a) connected to a circuit board plane (a surface of a substrate (11)) using at least one via (15a, column 4, line 26).

Nagasaka disclose the first contact point ***electrically connected*** to IC chips or chip component. However Nagasaka does not specifically disclose the IC chip or chip component, which being a capacitor having a terminal soldered to the first contact point. Novak et al. shows a printed circuit board as shown in figure 24 comprising a capacitor (202) having terminals or leads (210, 212) mounted on and soldered to the surface of the printed circuit board, and a resistive region (250) connected to a first terminal (210) by a solder.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a teaching of Novak et al. modified the component or chip

of Nagasaka in order to reduce variation in the electrical impedance with frequency of a capacitor mounted on the PCB.

As to claims 3-6, and 32-35, Nagasaka discloses the resistive material (12) includes first and second metals (column 4, lines 10-11), the first metal is nickel and the second metal is gold, see column 4, lines 30-31.

Claimed variations in relative dimensions, which do not specify a device which performs or operates any differently from the prior art, do not patentably distinguish applicant's invention. Gardner v. TEC Systems, Inc., 725 F.2d 1338 (Ct. App. Fed. Cir. 1984).

Regarding claim 7, Nagasaka and Novak do not specific disclose the particular dimensions of the first and second metals have a width of about 10 to about 1000 microns, a length of about 10 to about 5000 microns, and a total thickness of about 0.05 to about 2.5 microns. However, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a dimension of the resistive element in order to reduce sized and thickness for a miniature device, the workable dimensions of the resistive element would have been a matter of routine experimentation. In re Antonie, 559 F.2d 618 (CCPA 1977). Variations in the dimensional of the resistive element would have been obvious minor adjustments without patentable significance. See In re Aller, 105 USPQ 233 (CCPA 1955) (Where general conditions of the claim are disclosed in the prior art, it is not inventive to discover optimal or workable ranges by routine experimentation).

As to claim 10, Nagasaka discloses the second contact point (12a) is connected to the circuit board plane using a plurality of vias (15, column 4, line19).

As to claims 11, 31, Nagasaka does not disclose a summed series resistance provided by adding a value of resistance for the resistive element to an effective series resistance of the capacitor is approximately equal to an effective series resistance of a circuit board and the circuit board plane connected to circuit board.

Novak et al. ('622) teaches a summed series resistance provided by adding a value of resistance for the resistive element to an effective series resistance of the capacitor is approximately equal to an effective series resistance of a circuit board and the circuit board plane connected to the circuit board.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a teaching of Novak et al. (claim 11) employ in the resistive element of Nagasaka in order to provide an electrical power distribution structure and to reduce variation in the electrical impedance with frequency of a capacitor mounted on the PCB.

As to claim 30, Nagasaka discloses an outside surface of the resistive element being attached (by a conductive material filled in the through holes 15).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Otani et al., Rizvi et al., and Ishiyama et al. disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Dinh whose telephone number is 571-272-1929. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Tuan Dinh', with a long, sweeping horizontal line extending to the right.

Tuan Dinh
July 21, 2005.